

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image processing apparatus comprising:

an input unit that acquires a RGB signal corresponding to a color image;

a conversion unit that converts the RGB signal into a CMY signal according to characteristics of color image material;

an extraction unit that extracts an image attribute from the CMY signal; and

a processing unit that applies, based on the image attribute, an adaptive image processing to the RGB signal.

Claim 2 (Original): The image processing apparatus according to claim 1, wherein the extraction unit calculates an edge amount of the color image as the image attribute.

Claim 3 (Original): The image processing apparatus according to claim 1, wherein the extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the image attribute.

Claim 4 (Original): The image processing apparatus according to claim 1, wherein the conversion unit changes a conversion coefficient for converting the RGB signal into the CMY signal based on a type of the color image.

Claim 5 (Original): The image processing apparatus according to claim 4, wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 6 (Withdrawn): An image processing apparatus comprising:

- an input unit that acquires a RGB signal corresponding to a color image;
- a first conversion unit that converts the RGB signal into a CMY signal;
- an extraction unit that extracts an image attribute from the CMY signal;
- a second conversion unit that generates a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal; and

a processing unit that applies, based on the image attribute, an adaptive image processing to the signal generated by the second conversion unit.

Claim 7 (Withdrawn): The image processing apparatus according to claim 6, wherein the extraction unit calculates an edge amount of the color image as the image attribute.

Claim 8 (Withdrawn): The image processing apparatus according to claim 6, wherein the extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the image attribute.

Claim 9 (Withdrawn): The image processing apparatus according to claim 6, wherein the first conversion unit changes a conversion coefficient for converting the RGB signal into the CMY based on a type of the color image.

Claim 10 (Withdrawn): The image processing apparatus according to claim 9, wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 11 (Withdrawn): An image processing apparatus comprising:

- an input unit that acquires a RGB signal corresponding to a color image;
- a first extraction unit that extracts a first image attribute from the RGB signal;
- a conversion unit that converts the RGB signal into a CMY signal;
- a second extraction unit that extracts a second image attribute from the CMY signal;

and

- a processing unit that applies, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 12 (Withdrawn): The image processing apparatus according to claim 11,
wherein

- the first extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the first image attribute, and

- the second extraction unit calculates an edge amount of the color image as the second image attribute.

Claim 13 (Withdrawn): The image processing apparatus according to claim 12,
wherein the second extraction unit calculates the edge amount from a C signal and an M signal of the CMY signal as the second image attribute.

Claim 14 (Withdrawn): The image processing apparatus according to claim 11,
wherein the conversion unit changes a conversion coefficient for converting the RGB signal into the CMY signal based on a type of the color image.

Claim 15 (Withdrawn): The image processing apparatus according to claim 14, wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 16 (Withdrawn): An image processing apparatus comprising:
an input unit that acquires a RGB signal corresponding to a color image;
a first extraction unit that extracts a first image attribute from the RGB signal;
a first conversion unit that converts the RGB signal into a CMY signal;
a second extraction unit that extracts a second image attribute from the CMY signal;
a second conversion unit that generates a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal; and
a processing unit that applies, based on the first image attribute and the second image attribute, an adaptive image processing to the signal generated by the second conversion unit.

Claim 17 (Withdrawn): The image processing apparatus according to claim 16, wherein
the first extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the first image attribute, and
the second extraction unit calculates an edge amount of the color image as the second image attribute.

Claim 18 (Withdrawn): The image processing apparatus according to claim 17, wherein the second extraction unit calculates the edge amount from a C signal and an M signal of the CMY signal as the second image attribute.

Claim 19 (Withdrawn): The image processing apparatus according to claim 16, wherein the first conversion unit changes a conversion coefficient for converting the RGB signal into the CMY based on a type of the color image.

Claim 20 (Withdrawn): The image processing apparatus according to claim 19, wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 21 (Currently Amended): An image processing apparatus comprising:
an input unit that acquires a RGB signal corresponding to a color image;
a first conversion unit that converts the RGB signal into a CMY signal according to characteristics of color image material;

a first extraction unit that extracts a first image attribute from the CMY signal;
a second conversion unit that generates a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;

a second extraction unit that extracts a second image attribute from the signal generated by the second conversion unit; and

a processing unit that applies, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 22 (Original): The image processing apparatus according to claim 21, wherein the first extraction unit calculates an edge amount of the color image as the first image attribute, and

the second extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the second image attribute.

Claim 23 (Original): The image processing apparatus according to claim 22, wherein the first extraction unit calculates the edge amount from a C signal and an M signal of the CMY signal as the second image attribute.

Claim 24 (Original): The image processing apparatus according to claim 21, wherein the first conversion unit changes a conversion coefficient for converting the RGB signal into the CMY signal based on a type of the color image.

Claim 25 (Original): The image processing apparatus according to claim 24, wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 26 (Withdrawn): An image processing apparatus comprising:
an input unit that acquires a RGB signal corresponding to a color image;
a first conversion unit that converts the RGB signal into a CMY signal;
a first extraction unit that extracts a first image attribute from the CMY signal;
a second conversion unit that generates a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;
a second extraction unit that extracts a second image attribute from the signal generated by the second conversion unit; and

a processing unit that applies, based on the first image attribute and the second image attribute, an adaptive image processing to the signal generated by the second conversion unit.

Claim 27 (Withdrawn): The image processing apparatus according to claim 26,
wherein

the first extraction unit calculates an edge amount of the color image as the first image attribute, and

the second extraction unit generates an image area separating signal that is used to separate an image into a plurality of areas as the second image attribute.

Claim 28 (Withdrawn): The image processing apparatus according to claim 27,
wherein the first extraction unit calculates the edge amount from a C signal and an M signal of the CMY signal as the second image attribute.

Claim 29 (Withdrawn): The image processing apparatus according to claim 26,
wherein the first conversion unit changes a conversion coefficient for converting the RGB signal into the CMY signal based on a type of the color image.

Claim 30 (Withdrawn): The image processing apparatus according to claim 29,
wherein the type of the color image is any one of a print image, a photographic printing paper image, and a photocopy image.

Claim 31 (Currently Amended): An image processing method comprising:
acquiring a RGB signal corresponding to a color image;

converting the RGB signal into a CMY signal according to characteristics of color image material;

extracting an image attribute from the CMY signal; and

applying, based on the image attribute, an adaptive image processing to the RGB signal.

Claim 32 (Withdrawn): An image processing method comprising:

acquiring a RGB signal corresponding to a color image;

converting the RGB signal into a CMY signal;

extracting an image attribute from the CMY signal; and

generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;

applying, based on the image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.

Claim 33 (Withdrawn): An image processing method comprising:

acquiring a RGB signal corresponding to a color image;

extracting a first image attribute from the RGB signal;

converting the RGB signal into a CMY signal;

extracting a second image attribute from the CMY signal; and

applying, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 34 (Withdrawn): An image processing method comprising:

- acquiring a RGB signal corresponding to a color image;
- extracting a first image attribute from the RGB signal;
- converting the RGB signal into a CMY signal;
- extracting a second image attribute from the CMY signal;
- generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal; and
- applying, based on the first image attribute and the second image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.

Claim 35 (Currently Amended): An image processing method comprising:

- acquiring a RGB signal corresponding to a color image;
- converting the RGB signal into a CMY signal according to characteristics of color image material;
- extracting a first image attribute from the CMY signal;
- generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;
- extracting a second image attribute from the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal; and
- applying, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 36 (Withdrawn): An image processing method comprising:

- acquiring a RGB signal corresponding to a color image;

converting the RGB signal into a CMY signal;
extracting a first image attribute from the CMY signal;
generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;
extracting a second image attribute from the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal; and
applying, based on the first image attribute and the second image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.

Claim 37 (Currently Amended): A computer readable medium storing a computer program product including computer readable code that ~~makes~~ causes a computer to execute:

acquiring a RGB signal corresponding to a color image;
converting the RGB signal into a CMY signal according to characteristics of color image material;
extracting an image attribute from the CMY signal; and
applying, based on the image attribute, an adaptive image processing to the RGB signal.

Claim 38 (Withdrawn): A computer product that makes a computer execute:
acquiring a RGB signal corresponding to a color image;
converting the RGB signal into a CMY signal;
extracting an image attribute from the CMY signal; and
generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;

applying, based on the image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.

Claim 39 (Withdrawn): A computer product that makes a computer execute:
acquiring a RGB signal corresponding to a color image;
extracting a first image attribute from the RGB signal;
converting the RGB signal into a CMY signal;
extracting a second image attribute from the CMY signal; and
applying, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 40 (Withdrawn): A computer product that makes a computer execute:
acquiring a RGB signal corresponding to a color image;
extracting a first image attribute from the RGB signal;
converting the RGB signal into a CMY signal;
extracting a second image attribute from the CMY signal;
generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal; and
applying, based on the first image attribute and the second image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.

Claim 41 (Currently Amended): A computer readable medium storing a computer program product including computer readable code that ~~makes~~ causes a computer to execute:

acquiring a RGB signal corresponding to a color image;
converting the RGB signal into a CMY signal according to characteristics of color image material;
extracting a first image attribute from the CMY signal;
generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;
extracting a second image attribute from the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal; and
applying, based on the first image attribute and the second image attribute, an adaptive image processing to the RGB signal.

Claim 42 (Withdrawn): A computer product that makes a computer execute:
acquiring a RGB signal corresponding to a color image;
converting the RGB signal into a CMY signal;
extracting a first image attribute from the CMY signal;
generating a signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal from the RGB signal;
extracting a second image attribute from the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal; and
applying, based on the first image attribute and the second image attribute, an adaptive image processing to the signal including either of a luminance/chrominance difference signal and a lightness/chromaticity signal.